

# JLCooper Electronics

Control, Automation, Synchronization and Interfacing Products





# SERIOUS ABOUT CONTROL

*"Precise control unleashes your creativity and freedom."*

JLCooper is serious about control. We're devoted to building professional-quality Control, Interfacing, Synchronization and Automation Products. Our mission succeeds when an impossible problem is solved or a difficult job is made easier.

Effortless control expands the essence of your imagination. JLCooper controllers let you work faster and with more proficiency. They provide the ease-of-use and tactile elegance that can be missing from "software only" user interfaces.

With the largest line of control products for computer based systems and specialized applications, our products set the standards that others follow.

Our record speaks for itself with over 20 years of award winning products, hard at work every day.

Our clients include ABC, Agfa Healthcare, Apple Computer, BBC, CBC, CBS, CNN, ESPN, HBO, Home & Garden Television, Heartlab, IBM, IMAX, Industrial Light & Magic, Lockheed Martin, MIT, MTV, National Center for Macrobiological Research, NBC, NFL Films, Pixar, Sony Pictures, Universal Studios, Walt Disney Studios, Warner Brothers Studios, the U.S. Naval Undersea Warfare Center and the Library of Congress.

Thousands of leading companies in audio and video production, television and radio broadcast, animation, sound reinforcement, lighting, aerospace, education, scientific research, medical, recording artists and others rely on JLCooper products every day.

Contact us today to find out how serious we are about making your job easier.



**JLCOOPER ELECTRONICS**



# PASSIONATE ABOUT QUALITY

JLCooper's MCS-3800 - Media Command Station™ is a compact, control surface that provides the flexibility professionals need, and compatibility with Pro Tools, Nuendo, Cuebase SX, Logic\*, Digital Performer, Pyramix and most MIDI/audio software.

Features include touch-sensitive motorized faders, an array of 60 function keys, back lit LCD and LED dual displays, 5 detented rotary encoders, professional transport controls, a full size numeric keypad, and a weighted, balanced, optically-encoded jog wheel with concentric shuttle ring.

MCS-3000 Series products are designed with a modular approach. This lets you customize the control surface for your specific needs and budget. Optional RS-422/9PIN (P2) RS-232, GPI, USB, and Ethernet interface cards provide extended control capabilities others can't match.

MCS-Bridge further expands the physical controls and provides a large, back-lit/push-button LCD display for each channel. Displays track labels, track arming, panning, metering and more. Also adds 2 push-button, rotary encoders, and a 2-axis joystick for each channel.

MCS-3000X™ provides additional faders or it can be used as a stand alone controller with Pro Tools, and most systems. Up to 7 expanders can be added providing 64 fader channels

MCS-Panner™ controls 5.1 surround mixing with DP4, Pro Tools, Nuendo and most computer based systems. It can also serve as a stand-alone "MIDI Joystick" (using an optional adapter) with most digital mixing consoles.



*MCS-3800W - Media Command Station  
Configured with MCS-Panner and MCS-Bridge.*



Custom desks can be configured for virtually any application. No other control product offers the advanced flexibility and proven reliability of the MCS-3000 Series.

A new USB interface and mapping software lets you customize your Media Command Station to work efficiently with any program.

The software knows which application is running in the foreground and switches keysets automatically, for seamless control of key commands, mouse clicks and macros. This innovative application is the first to provide all this, combined with programmable MIDI over a single USB connection.



Can't wait to get your hands on your own MCS-3000 Series Media Command Station? Call JLCooper Electronics today to get ahead of the curve and in control of your system.

## General Features

- Provides Fast Access to On-Screen Mixing and DSP Functions
- Attractive, Low Profile, Compact Design, Quality Construction
- Professional and Solid-VTR Style Jog Wheel and Shuttle Ring
- Full Size Numeric Keypad
- 2 Card Slots for Additional Control Options including...  
RS-422 Master (P-2 Compatible 9-PIN for VTR Control),  
RS-422 Slave, RS-232, USB, Ethernet and GPI.
- Expandable up to 64 Fader Channels Using MCS-3000X
- Optional Contoured Simulated Stone Wrist Rest
- Physical Specs - MCS-3800 - Size 20.15" x 9.75" x 2.00

\* Logic Requires DanceTools Plugin



**Control, Automation, Synchronization, & Interfacing Products**

[WWW.JLCOOPER.COM](http://WWW.JLCOOPER.COM)



# MCS-3800 MEDIA COMMAND STATION



MCS-3800w – Media Command Station

**MCS-3000 Series products are the pinnacle of our control station product line. The Winner of Videography Magazine's "Editors Choice Award", MCS-3800 and other Media Command Station's are being used and supported by AVID, ABC, CBS, CNN, Digidesign, Digigram, Discreet, DPS, ETC, Leitch, IFX, Incite, Inscribe, MOTU, Merging Technologies, MTI, NBC, Panasonic, Phillips, Pinnacle, Soffimage, and many others.**

MCS-3000 Series – Media Command Stations provide direct control of popular computer-based workstations and hard disk recording systems for audio and video production, post production and other applications.

You can record, edit and mix your projects to perfection, using an automated, moving fader, tactile control surface from JLCoeper Electronics, the industries most widely used control surface technology.

Features include touch-sensitive motorized faders, an array of 60 programmable function keys, back lit LCD and LED dual displays, 5 rotary encoders, professional transport controls, a full size numeric keypad and a balanced concentric jog wheel with shuttle ring.

MCS-3800™, MCS-3400™ and MCS-3000™ expand to offer as many as 64 moving faders with over 300 physical function keys and a wide variety of control options.

Beautifully sculpted with an optional simulated stone (granite) trim and wrist rest\*, the MCS-3800 is a solid professionally crafted controller. It's a proven control solution in demanding professional environments.

With 100 locate points and built in SMPTE/EBU and MTC readers, Command Stations provide a coherent universal control of your busy production environment.

MIDI I/O is standard. Two expansion slots let you include interface cards for complete control. Cards include RS-422 P2 for 9-Pin VTR Control or Host Mode, RS-232, GPI, USB, Quad 9-Pin and Ethernet.

As a third generation moving fader controller, the MCS-3000 Series truly advances the state of modular, tactile, virtual control for non-linear editing systems, hard disk recorders and digital mixers. With a variety of expansion options, its uses are limited only by your imagination!

## MCS-3000 Series Features

- Adds Tactile Controls to Digital Audio and Video Workstations
- For Professional Music & Video Production and Post Applications
- Provides Access to On-Screen Mixing and DSP Functions
- Built in SMPTE/EBU and MIDI Time Code Reader
- A Variety of Flexible Configuration Options
- New - Optional USB Interface and Software Lets You Add Additional Controls to Any Application
- Low Profile and Compact Design with Heavy Duty Construction
- 100mm Motorized Touch Sensitive Moving Faders
- 5 Physical Rotary Encoder Controls
- Concentric Jog Wheel and Shuttle Ring (Optically Encoded)
- 2 x 40 Character Back-lit LCD with Contrast Adjustment
- Full Size Numeric Keypad
- Programmable Fader Touch Sensors
- Sends Various MIDI Messages - Including MIDI Machine Control
- 2 Interface Card Slots for Control Options including GPI, RS-422 (9-PIN for VTR Control), RS-232, USB and Ethernet.
- Expandable to 64 Fader Channels Using MCS-3000X
- \*"W" Models Include Contoured Simulated Granite Wrist Rest



## OTHER MCS-3000 SERIES MODELS AND EXPANSION OPTIONS

The demands placed on a controller differ widely, depending on the type of editing and the amount of space available. That's why Media Command Stations are designed with a unique, modular approach.

MCS-3000 Series controllers are offered in a variety of flexible configurations. Options can be combined to form a custom configuration for your specific requirements and budget.

### MCS-3800 MEDIA COMMAND STATION

The MCS-3800™ is an eight fader console with a full complement of necessary controls. It features touch-sensitive motorized faders, 60 function keys, full size numeric keypad, professional transport controls, LCD and LED displays, MIDI I/O and 2 expansion slots for other optional interfaces. It serves as a hub for an expanded system with a wide variety of optional accessories for custom requirements.

**MCS-3800 Physical Specifications**

- 20.15" x 9.75" x 2.00" (W/O Wrist Rest)
- Weight 15 lbs.

**MCS-3800w Physical Specifications**

- 22" x 12.5" x 2.00" (W/Wrist Rest)
- Weight 18 lbs.



### MCS-3400 MEDIA COMMAND STATION

The MCS-3400™ is a smaller main console for applications where space is at a premium or fewer than eight faders are required. It features four touch-sensitive, motorized faders and it's smaller size makes it the ideal addition to personal editing suites. It may be fully expanded with a variety of options and it can be used with a many computer-based editing systems. It is otherwise identical to the MCS-3800.

**MCS-3400 Physical Specifications**

- 16.5" x 9.75" x 2" (W/O Wrist Rest)
- Weight 10 lbs.

**MCS-3400w Physical Specifications**

- 18" x 12.5" x 2.00" (W/Wrist Rest)
- Weight 12 lbs.



### MCS-3000 MEDIA COMMAND STATION

The MCS-3000™ is the basis of the MCS-3000 Series product family. It is a smaller main console for applications where space is at a premium or no faders are required. MCS-3000 Series controllers are used daily in audio editing, video editing, compositing, broadcast, slo-motion control, animation, virtual reality, live sound reinforcement, lighting control and other specialized applications.

**MCS-3000 Physical Specifications**

- 13" x 9.75" x 2 (W/O Wrist Rest)
- Weight 8 lbs.

**MCS-3000w Physical Specifications**

- 14.5" x 12.5" x 2" (W/Wrist Rest)
- Weight 10 lbs.



### MCS-3000X 8 CHANNEL EXPANDER/CONTROLLER

The MCS-3000X™ is a fader expander for the MCS-3000, MCS-3400, and MCS-3800. Alternately, it can be used as a stand alone controller with most MIDI software programs. It features 8 touch-sensitive motorized faders, 32 switches, and built in MIDI I/O. Up to seven MCS-3000X's can be joined to form a console with up to 64 touch sensitive moving faders.

It controls AVID's Media Composer, Film Composer and Xpress, Digidesign's Pro Tools, and most computer based MIDI software including programs from Cakewalk, Emagic, Mark of the Unicorn, Steinberg and others.

**MCS-3000x Physical Specifications**

- 9.25" x 9.75" x 2.00" (W/O Wrist Rest)
- Weight 8 lbs.

**MCS-3000xw Physical Specifications**

- 11" x 11.25" x 2.00" (W/Wrist Rest)
- Weight 9 lbs.





## MCS-CLIPSHOT - TACTILE CONTROL PALETTE



MCS-ClipShot™ is a new addition to the MCS-3000 Series - Media Command Station product family. It's a switch palette with 40 relegendable multi-colored 24 x 32 LCD buttons (capable of displaying text and graphics), 20 lighted buttons and a 2 x 40 backlit LCD display.

It can be used as a stand-alone controller or it can be interfaced with other MCS-3000 Series modules to form a larger console. It connects with an MCS-3000, MCS-3400 or MCS-3800 using a modular telephone cable and has 2 - MCS-3000 Interface Card Slots for a variety of connections including RS-232, RS-422, USB, Ethernet, Quad 422/9Pin and GPI.

MCS-ClipShot provides Instant Video Clip Access or Audio Playback Triggering in broadcast, post production and other professional applications where relegendable buttons are very useful.

It's LCD buttons can also function as a QWERTY keyboard for your computer, eliminating the need for a traditional keyboard for naming clips.

*New advanced features in MCS-ClipShot provide direct support for Doremi and other Video Disk Recorders and Servers via RS-422 or ethernet. Odetics Protocol is also supported.*

*Stand alone support for MCS-Wiper is now possible in some host mode applications.*

*New Macintosh support for our USB interface, now available for any OSX applications.*

### Physical Specifications

- Size - 13" x 10" x 2.5"
- Weight - 20 lbs.

## MCS-TRACKER 3000 - TRACK ARMING CONTROLLER

MCS-Tracker™ provides dedicated track arming buttons, function keys and track status indicators for the MCS-3000 Series. It features 32 track arming buttons, and Dual LED's for each channel provide highly visible confirmation of track status. Function keys provide track grouping, all safe, bank change and three user-definable groups.

(The MCS-Tracker is also available as an MCS-Pro Series low profile package that operates as a stand alone MIDI/MMC version. See Page 14 for more information.)

### Physical Specifications

- Size - 11.5" x 8.0" x 2.5"
- Weight - 6 lbs.



## MCS-BRIDGE - CHANNEL DISPLAY AND PAN OPTION



MCS-Bridge™ further expands the physical controls of Media Command Station. It mounts behind the fader section of an MCS-3800 or MCS-3000X when used as an expander.

The MCS-Bridge provides a large, relegendable back-lit/push-button LCD display for each channel. The unique LCD display/buttons can show text (like channel and parameter labels) and graphic control elements. They can change color to indicate track status or other mission critical information. Additional controls include two push-button, rotary encoders, and a 2-axis joystick on each channel. MCS-Bridge is compatible with DP4, Pro Tools, Pyramix and other audio programs and supported in developer host modes.

### Physical Specifications

- Size - 9.25" x 6.25" x 2.0"
- Weight - 3 lbs.





## MCS-PANNER

### THREE AXIS JOYSTICK CONTROLLER

The MCS-Panner™ is a high-quality, 3-axis joystick mechanism with five rotary encoders and 10 switches, that controls surround panning for digital audio mixers and workstations. You can join it to an MCS-3000, MCS-3400 or MCS-3800 to form a larger console or you can use it by itself as a stand alone Surround Panning Controller using the optional MCS-Panner MIDI Adapter. MCS-Panner interfaces with Pro Tools, Pyramix, Nuendo and a variety of digital mixing consoles to control surround features. In addition, MCS-Panner also sends MIDI Controllers, which your mixer can "map" to control a variety of other features.

**Physical Specifications**

- Size - 6.25" x 11.25" x 2.5"
- Weight - 3 lbs.

## MCS-ORBITER

### TOUCH-SENSITIVE - MOTORIZED JOYSTICK CONTROLLER

MCS-Orbiter™ is a Motorized Joystick Controller for the MCS-3000 Series. It features a high-quality professional controller that is both motorized and touch sensitive, making it the essential controller for surround mixing, animation and other applications. The joystick allows you to precisely input position-related automation moves. Like motorized faders, it dynamically tracks previously written moves. Touch-sensitivity lets you perform "takeover" edits; you can grab the joystick at any time to enter new positional information. The MCS-Orbiter features 5 rotary encoders and 9 function keys. It operates as a stand-alone controller, or may be joined to other MCS-3000 Series products to form a larger console. Optional MCS-Orbiter MIDI Adapter Sold Separately.

**Physical Specifications**

- Size - 6.25" x 11.25" x 2.5"
- Weight - 3 lbs.



## MCS-WIPER - TRANSITION CONTROLLER

MCS-Wiper™ is a video fader that controls cuts, dissolves, slo-mo and other transitions in video editing and animation software. It provides a smooth, high quality T-Bar with five rotary encoders and eight buttons for controlling on screen functions. It can be attached to a MCS-3000, MCS-3400, MCS-3800 or MCS-ClipShot to form a larger console.

**Physical Specifications**

- Size - 6.25" x 11.25" x 2.5"
- Weight - 3 lbs.

## MCS-NAVIGATOR - PRECISION TRACKBALL CONTROLLER

MCS-Navigator™ is a single trackball version of our MCS-Spectrum. It can be used with advanced video color correction software or as a mouse replacement and navigational device.

It has a single transparent, back-lit, trackball mechanism with specially designed, free spinning control ring, 6 high-resolution rotary encoders, and 8 function keys.

MCS-Navigator can be used as a stand-alone controller, or it can be physically connected with other MCS-3000 Series modules to form a larger console. It interfaces via USB, RS-232, RS-422, MIDI (specify when ordering) or it can interface to your system via other MCS-3000 Series Modules.

MCS-Spectrum is available with or without simulated stone wrist rest and trim.

**Physical Specifications**

- Size - 6.25" x 11.25" x 2.5"
- Weight - 3 lbs.





## MCS-SPECTRUM - COLORIST CONTROL STATION



MCS-Spectrum Colorist Command Station is the newest addition to the family of award winning MCS-3000 Series - Media Command Station products.

It is designed for use with advanced video color correction software and other applications where multiple trackballs with control rings are beneficial.

Controls include 3 transparent, backlit, trackball mechanisms with purpose-designed, free spinning control rings, 6 high-resolution rotary encoders, Dual VF displays and 14 function keys.

It can be used as a stand-alone controller or it can be interfaced with other MCS-3000 Series modules to form a larger console. It connects with an MCS-3000, MCS-3400 or MCS-3800 using a modular telephone cable and has 2 - MCS-3000 Interface Card Slots for a variety of connections including RS-232, RS-422, USB, Ethernet, Quad 422/9Pin and GPI.

MCS-Spectrum is compatible with IFX Piranha Cinema, FilmLight BaseLight and other applications.

Available with or without simulated stone wrist rest and trim.

- Optional Simulated Stone Wrist Rest
- Physical Specifications - Size 13" x 10" x 2.5"
- Weight 20 lbs.

- For Use With Advanced Color Correction Software
- Provides Tactile Feedback for Colorist Workflow
- Precise, High-Resolution, Professional Quality Controls
- A Variety of Flexible Configuration Options
- Attractive, Low Profile and Compact Design
- 2 Card Slots for Flexible Interfacing Capability
- Optional USB Interface and Software Lets You Add Additional Controls to Any Application

*MCS-3800 - Media Command Station  
with 3-MCS-3000x, 4-MCS-Bridges  
and MCS-Panner*



*MCS-3000w - Media Command Station  
with MCS-SpectrumW (joined)*

### MODULAR MCS-3000 SERIES - MEDIA COMMAND STATION EXPANDED CONFIGURATION EXAMPLES



*MCS-3000 - Media Command Station  
with MCS-Wiper*

*"JLCooper has been a proven leader  
in controllers for years ... and it shows!"*  
*"MCS-3800 is totally professional"*  
*"MCS-3800 is an excellent choice"*  
*- Electronic Musician (Feb 2002)*



*MCS-3800w - Media Command Station  
with (1) MCS-3000xw, (2) MCS-Bridge  
and MCS-PannerW in custom chassis.*



## MCS-3000 SERIES INTERFACE CARDS

### MCS-3000 SERIES USB INTERFACE CARD

This plug in card option for the MCS-3000 Series – Media Command Station allows connection to computers via USB.



Use our new USB interface and software to adapt the Media Command Station to work efficiently with virtually any application. Software keyset examples are included for popular audio, video and animation programs.

Our smart USB driver knows which application is running in the foreground and switches keysets automatically for seamless control of key commands, mouse clicks and macros. This innovative application is the first to provide this combined with programmable MIDI control all over a single USB connection. Windows 2000, NT, Me, XP and MAC OS9, OSX.

*New Mac OSX support for MCS-ClipShot now available.*



### MCS-3000 SERIES RS-232 INTERFACE CARD

The addition of this plug in card for the MCS-3000 Series lets you configure your Media Command Station for direct computer control. Simply plug the interface card into one of the slots in a MCS-3000, MCS-3400 or MCS-3800 and you're in control. Baud rate is adjustable.

### MCS-3000 SERIES 9-PIN/RS-422 INTERFACE CARD

This card provides direct 9-Pin control of professional VTR's and DDR's, or it can be used to interface your Command Station directly to a serial port on your computer. Commands from a host computer can be passed through the MCS and be directed to the individual machines.

### MCS-3000 SERIES QUAD 422 CARD

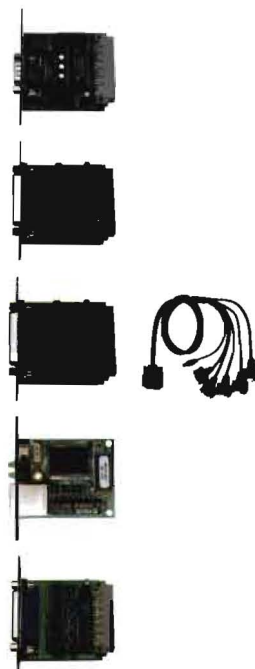
This card allows connection of up four professional VTR's or DDR's for control of transport, track arming, locates and other functions. Commands from a host computer can be passed through and directed to individual machines. With the addition of the Quad 422 Card, the MCS is not only a remote for your NLE or broadcast system, but also an interface for multi-machine control.

### MCS-3000 SERIES ETHERNET INTERFACE CARD

This new interface card provides a direct 10/100 ethernet connection for controlling network based applications or situations where a long cable run is required. It simplifies the connection to your computer or LAN, and keeps the clutter of cables on your desktop to a minimum.

### MCS-3000 SERIES GPI INTERFACE CARD

This plug in card for the MCS-3000 Series – Media Command Station interfaces to any device that needs a General Purpose Interface (switch closure) connection. It provides eight GPI Outputs and one GPI input. Simply install the interface card into a slot in the MCS-3000, MCS-3400 or MCS-3800.



## UNEQUALLED INTERFACING FLEXIBILITY

As you can see, MCS-3000, MCS-3400 and MCS-3800 Media Command Stations have a variety of interface types to work in virtually any application. Most MCS-3000 Series expansion options interface via our internal bus and connect with a modular cable.

Built in MIDI ports, a SMPTE and MTC reader are included. Two additional interface card slots provide you with a the ability to adapt the controller to your requirements. Easy to install interface cards provide additional functionality with various applications that include direct support. Contact your JLC Cooper representative to discuss specific interfacing requirements for your specific applications.

*Media Command Station Rear View shows MIDI In/Out, JLC Expansion Port, SMPTE In and Two Expansion Card Slots for unequalled interfacing flexibility.*







*Controls Most  
Professional VTRs,  
DDRs, Servers and  
Computer Based  
Systems.*

# EDIT SUITE SERIES

*Editors Work Faster and with Greater  
Precision Using JLC Cooper's Tactile  
Control Products.*

## ES-SLOMO UNIVERSAL INSTANT REPLAY CONTROLLER

ES-SloMo is a compact new controller for News, Sports, Scoreboard and other editing operations. It makes precise control of professional VTRs, DDRs or Server Channels quick and easy. It's a full featured 4-machine editor and universal Jog/Shuttle remote. It's sleek design and low cost, make it the perfect addition to edit suites, remote trucks and other studio applications.

ES-SloMo features include professional transport buttons, choice of Sony or Panasonic Jog/Shuttle Wheel for convenient picture search operations, a high-quality T-Bar for slo-mo and shuttle tape operation, an easy to read 2 x 16 VF display for accurate editing, a full size numeric keypad, fast access function keys and an integrated quad snake/power cable to minimize desktop clutter.

### ES-SloMo Advantages

- Controls a wide range of VTRs and DDRs
- Assemble, Insert, Crash and Disable (Lock) Editing Modes
- Mark In and Mark Out keys store up to 500 total cue location points
- Simultaneous Control up to 4 VTRs, DDRs or Server Channels via 4 RS-422 9Pin Serial Ports
- T-Bar Control for slow motion control sends Shuttle, Jog or Variable Play
- Dynamic slow motion replays directly accessed from the 'T' bar
- T-Bar Programmable - Min-Max, Preset Speeds, Active or Passive Modes
- Programmable Cueing Modes - Automatic Play All Cues Function
- Log Operation useful in QC Applications
- 16 Variable Replay Speeds
- EE/PB switching
- Global record lock feature
- Direct support for Doremi V1 and V1 MP2
- Integrated quad snake/power cable minimizes desktop clutter. A single cable extends 10' so that all connections can be hidden neatly away from the operator including a remote power connection.

#### ES-SloMo Features

- Compact Design
- Controls 4 Machines
- VF Timecode Display
- Numeric Keypad

#### Physical Specifications

- Size 10" x 10.25" x 3"
- Weight 6 Lbs.

## ES-4/100 MOTORIZED FADER CONTROLLER

ES-4/100 and 8/100 are our new Edit Suite Series compact automation controllers.

Audio mixing has never been this fast and easy. The ES-4/100 features four 100mm touch-sensitive, motorized faders, 16 channel switches, 4 function keys and bank shift buttons for control of Select, Solo, Mute and other functions.

It's easy to refine and perfect your mix with the right tool for the job. The ES-4/100 is available in RS-232, RS-422, USB and MIDI versions.



#### ES-4/100 Physical Specifications

- Size - 6.5" x 10.5" x 3"
- Weight - 4 Lbs.

## ES-8/100 MOTORIZED FADER CONTROLLER

ES-8/100 features 8 touch-sensitive motorized faders, 32 channel switches, 4 function keys and bank buttons.

The ES-8/100 is available in RS-232, RS-422, USB and MIDI versions.



#### ES-8/100 Physical Specifications

- Size - 10.75" x 10.5" x 3"
- Weight - 6 Lbs.



# ES-450S UNIVERSAL JOG/SHUTTLE REMOTE

The ES-450s - Universal Jog/Shuttle Remote makes the operation of professional video recorders fast and easy.

## Controls Most Professional VTR's and DDR's

The ES-450 is a fully functional 9-Pin/P2 Universal Jog/Shuttle Remote Controller for VTR's or DDR's.

It's completely compatible with most professional machines including most BVW, UVW and other decks.

The remote is designed for fast and easy editing. It incorporates a keyboard layout which minimizes key strokes, a Jog/Shuttle Wheel for convenient picture search operations, a back-lit LCD Time Code display for easy and accurate editing and much more.

It can be connected to various machines, such as the VO-9850 series U-matics and other 9-pin equipped VTR's and DDR's from Sony, Panasonic, JVC and others.

Functionality is at your fingertips with clearly labeled buttons and a natural-feeling key arrangement that helps you work more efficiently.

The ES-450's functions are laid out for fast and intuitive operation without having to tediously scroll through menus to get to often accessed features.

Access to Forward Play, Reverse Play, Rewind, Fast Forward, Still/Stop, Shuttle Select, Frame +, Frame-, Mark In, Mark Out and Eject are arranged in an array around the wheel in easy reach. Record controls include Crash/Full, Assemble, Insert Video, A1, A2, A3 and A4 modes.

The Numeric Keypad provides easy entry of "search to time" locate operations.

There's an alternative to costly and cumbersome remotes that consume valuable desk space. ES-450 is the first choice for professionals in control.

## Audio Editing

The ES-450 employs an audio split function, which allows the audio edit in-point to be set differently from the video edit in-point. The ES-450 can effectively edit sound or music as well as it does video.

## New - Ethernet Interface

ES-450 is offered with a variety of interfaces for specific applications. Consult your JLC Cooper Dealer for more information.

A new Ethernet Interface provides long range control over LAN. It interfaces with Doremi Labs Video Disk Recorders, or use it with the our eBOX (listed on page 21) to remotely control serial equipped RS-422 and RS-232 decks and other devices over LAN or WAN.

## ES-450J

### UNIVERSAL JOG/SHUTTLE REMOTE



ES-450J is a new version of the ES-450 featuring the JLC Cooper Jog/Shuttle mechanism.

ES-450p provides the same world-class performance as the ES-450s.

### ES-450s Universal Jog/Shuttle Features

- Professional Quality Compact Remote Control
- Sony Jog/Shuttle Mechanism
- High-Quality, Tactile Transport Keys
- Function Keys Provide Direct Access to Frequently Used Editing Features Including Shuttle Select, Frame +, Frame-, Mark In, Mark Out, Eject and Others
- Back-Lit LCD Time-Code Display
- RS-422/9-Pin Interface
- Numeric Keypad for Time Code Entry
- Durable All Metal Construction

### ES-450 Physical Specifications

- Size - 6.5" x 10.5" x 3.5"
- Weight - 4 lbs.



# MCS3-Media Control Station<sup>3</sup>

Media Control Station<sup>3</sup> is a central component of our MCS-Pro Series.

It features professional transport buttons for Record, Play, Stop, Fast Forward and Rewind. It has 18 physical buttons for a variety of editing functions and the new V/Stick Navigation Control.

A precision, optically encoded jog wheel with a concentric shuttle ring lets you control audio or video effortlessly and with frame accuracy.

## MCS<sup>3</sup> Features

- Professional Remote Control for VTR's, MIDI, Audio, Video and Multimedia Software
- Provides Remote Transport Control
- Balanced, Optical Jog Wheel with Shuttle Ring
- Remotely Controls up to 24 Different Functions
- Permits Remote Track Arming
- RTZ and Shuttle Back at Play Speed
- Durable All Metal Construction
- Available Models (Specify When Ordering)
  - MCS<sup>3</sup> RS-232 with Software for Windows
  - MCS<sup>3</sup> USB w/ Software for Windows or Mac
  - MCS<sup>3</sup> RS-422/9-Pin for VTR Control
  - MCS<sup>3</sup> MIDI with MIDI Machine Control
  - MCS<sup>3</sup> RS-422/9-Pin w/Sony Jog/Shuttle



**MCS<sup>3</sup> Physical Specifications**  
 ■ Size - 6.5" x 7" x 1.25"  
 ■ Weight - 5 Lbs.

"The addition of JKL shuttle control, a speed slider, key command sequences, and multiple keysets per application, make the MCS3 the controller of choice for professionals."

"MCS3 software for Windows is included with USB and RS-232 versions. It lets you use and create keyset (templates) for all of your favorite audio and video editing applications and more"

## MCS<sup>3</sup> USB Version

Controls Macintosh and Windows Applications

Media Control Station<sup>3</sup> USB version features professional transport buttons, a precision optically encoded jog wheel with a concentric shuttle ring and 18 function keys.

MCS3 USB software for MCS<sup>3</sup> supports Mac OS9 and OSX, Windows 98, 2000, Me and XP. It lets you use and customize supplied keysets for advanced control of Quicktime compatible applications including Cinestream, Final Cut Pro, iMovie, Media 100, Premiere, Pro Tools, Vegas Video, Virtual VTR and others.

JLCooper controllers let you work faster. They provide the ease-of-use and tactile elegance that can be missing from "software only" user interfaces. Professionals can depend on JLCooper control products to provide reliable service that far outlasts plastic alternatives.

MCS<sup>3</sup> works with virtually any software program.



MCS<sup>3</sup> USB Software for Macintosh OS9 and OSX



MCS<sup>3</sup> USB and MCS<sup>3</sup> RS-232 Software for Windows

## MCS<sup>3</sup> RS-232 Version

Controls Windows Applications

Media Control Station<sup>3</sup> RS-232 Version features professional transport buttons, a precision optically encoded jog wheel with a concentric shuttle ring and 18 function keys. Supplied software is compatible with Windows 98, 2000, NT, Me and XP and can be used with any editing software program. MCS<sup>3</sup> is directly supported by Discreet, Incite, Philips and other systems.

## MCS<sup>3</sup> MIDI/MMC Version

Controls Audio Hard Disk Recorders

Media Control Station<sup>3</sup> MIDI/MMC version sends MIDI Machine Control messages for controlling a variety of compatible hard disk recorders and computer based editing systems. Use it with recorders from Alesis, Akai, Fostex, Mackie, Roland, Tascam, and others. It can be coupled with FaderMaster Pro, FM4/60, FM 4/100 or MCS-ProTracker to form a compact custom MIDI console.



### MCS3s RS-422/9-Pin Version

*MCS3s – with Sony Jog/Shuttle Mechanism*

Features the familiar push-push jog/shuttle controller. Push wheel once for Jog mode. Push wheel again for shuttle mode. In shuttle mode, it features a detent “click” at play speed. Available in a RS-422/9-Pin version for controlling AVID Xpress, Symphony, Media Composer and Newscutter or professional P2 compatible VTRs and hard-disk based VTR emulators. Couples to MCS-Locator as a full function controller, capable of controlling up to 4 professional VTR’s.

**MCS<sup>3</sup> Physical Specifications**  
 ■ Size - 6.5" x 7" x 2.75"  
 ■ Weight - 5 Lbs.

### MCS3p RS-422/9-Pin Version

*MCS3p – with Panasonic Jog/Shuttle Mechanism*

A new lower cost version of our MCS3s with a Panasonic push-push jog/shuttle controller. Push wheel once for Jog mode. Push wheel again for shuttle mode. Available in a RS-422/9-Pin version for controlling AVID Xpress, Symphony, Media Composer and Newscutter, or professional P2 compatible VTRs and hard-disk based VTR emulators. It couples to MCS-Locator to as a full function controller, capable of controlling up to 4 professional video decks.

**MCS<sup>3</sup> Physical Specifications**  
 ■ Size - 6.5" x 7" x 2.75"  
 ■ Weight - 5 Lbs.

### MCS<sup>3</sup> RS-422/9-Pin Version

*MCS<sup>3</sup> – with JLCoooper Jog/Shuttle Mechanism*

Media Control Station<sup>3</sup> RS-422/9Pin version features professional transport buttons, a precision optically encoded jog wheel with a concentric shuttle ring and 18 function keys. It’s a 9-Pin/P2 compatible universal VTRor DDR jog/shuttle remote with Sony BVU 800/900 emulation. It couples to MCS-Locator to as a full function controller, capable of controlling up to 4 professional video decks.

**MCS<sup>3</sup> Physical Specifications**  
 ■ Size - 6.5" x 7" x 1.25"  
 ■ Weight - 5 Lbs.

### MCS-Locator Video Cue Controller

This low profile machine controller has the ability to quickly cue up to four VTR’s or DDR’s via RS-422/9-Pin. Typical applications include Start, Stop and Cueing of video tape recorders and digital disk recorders. MCS-Locator features a full size numeric keypad for inputting locate points and a large 7 segment LED time-code display. It can be physically joined with MCS<sup>3</sup> and other MCS-Pro Series Controllers. An optional deep chassis is available to match the MCS3s and MCS3p.

**MCS<sup>3</sup> Physical Specifications**  
 ■ Size - 6.5" x 7" x 1.25"  
 ■ Weight - 5 Lbs.





## FaderMaster Professional - MIDI Automation Controller

**Works with  
AVID Symphony,  
Composer, Xpress,  
NewsCutter  
and  
Fast Liquid Series!**



FaderMaster Professional™ is perfect for the audio or video professional involved with automation or digital audio recording. You can easily control, mix and edit with MIDI sequencers, hard disk recorders, MIDI-controlled audio mixers, synths, samplers, and signal processors and computer based video editing systems from AVID Technology and more.

### Professional Automated Mixdown System

FaderMaster Pro – MIDI Automation Controller provides the hands-on, tactile control you've been missing from your system. It features high-quality 100mm long-throw faders. These smooth tracking faders give you precision control of your audio mix.

FaderMaster Pro eliminates the aggravation encountered when using a keyboard or mouse to tediously mix or edit the volume of multiple tracks, just one-at-a-time. And it is fully programmable, for controlling volume, panning, EQ, effects, and other parameters.

And if eight faders and buttons are not enough, multiple FaderMaster Pro units can be linked to form a larger console.

FaderMaster Pro has 20 programmable banks for storing controller configurations, plus, 50 Factory Presets banks.

### FaderMaster Professional Features

- Eight Programmable High-Quality 100mm Faders
- Eight Programmable MIDI Buttons
- 1/4" Footswitch and Foot Pedal Inputs
- Internal Grouping, Scaling and End Point Adjustments
- More than 50 Factory Presets
- All Metal Construction
- Optional FMPro Software for Mac
- 12.25" x 6.75" x 1.5"
- Weight - 7 lbs.

## FADERMASTER 4/100



FaderMaster 4/100 is our newest, low-cost MCS-Pro Series (deep profile) Automation Controller. It features 4-100mm touch-sensitive, motorized faders, bank shift buttons and function keys.

It's available in MIDI, RS-232, RS-422 and USB versions. FM 4/100 can be used as a stand-alone device or it may be physically coupled with the MCS3S or MCS3P for use with editing software including AVID Symphony, Composer, Xpress, NewsCutter and others. The MIDI version emulates the MCS-3000x and can be used with most MIDI and audio software programs.

### FaderMaster 4/100 Features

- Controls MIDI, Audio, Video and Multimedia Software
- Select, Solo, Mute and Other Functions
- Durable All Metal Construction
- Available Models (Specify When Ordering)  
Fadermaster 4/100 MIDI  
Fadermaster 4/100 RS-232  
Fadermaster 4/100 RS-422  
Fadermaster 4/100 USB

### FM 4/100 Physical Specifications

- Size - 6.5" x 8.5" x 3"
- Weight - 5 Lbs.

## MCS-ProTracker - Low Profile MIDI Version

The "MCS-Tracker" features 32 track arming buttons and additional function keys. Dual LED's for each channel provide highly visible confirmation of track status. Function keys provide track grouping, all safe, bank change and other functions.

It may be interfaced with most popular digital audio recording devices that support remote track arming via MIDI Machine Control. MCS-Tracker may also be used with a variety of computer-based editing systems and music software programs for track arming and status functions.

### MCS-ProTracker Physical Specifications

- Size - 6.5" x 8.5" x 1.25"
- Weight - 3 Lbs.





# MCS2 Media Control Station<sup>2</sup>

Media Control Station<sup>2</sup> is the ultimate compact remote. It features large buttons for Record, Play, Stop, Fast Forward, Rewind and other editing functions. A precision optically encoded jog/shuttle wheel lets you jog or shuttle effortlessly with frame accuracy.

MCS<sup>2</sup> software, included with the RS-232 version, lets you use and customize presets for controlling software from Adobe, AVID, Media 100, Macromedia Sony and many others.

Four versions are available for controlling 9-Pin/RS-422 compatible Video Tape Recorders, computer based audio and video editing systems, hard disk recorders and more.



**MCS<sup>2</sup> Physical Specifications**  
■ Size - 8.5" x 3.25" x 1.5"  
■ Weight - 2 lbs.

## MCS<sup>2</sup> RS-232 Version


Media Control Station<sup>2</sup> RS-232 features professional transport buttons a precision, optically encoded jog wheel and jog/shuttle control button. Shift and Option modifier keys let the MCS<sup>2</sup> send more than 20 different control messages. Supplied software is compatible with Windows 98 and NT and can be used with any editing software program. It's our compact, low-cost jog/shuttle remote for Windows compatible applications.



## MCS<sup>2</sup> RS-422/9-Pin Version

Media Control Station<sup>2</sup> 9Pin features professional transport buttons, a precision optically encoded jog wheel and jog/shuttle control button. Shift and Option modifier keys let the MCS<sup>2</sup> send more than 20 different control messages including RTZ, Video, Insert, Reverse Shuttle at Play Speed, Audio Track Arming and more. MCS<sup>2</sup> 9Pin is our compact, low-cost RS-422/P2 compatible universal VTRor DDR jog/shuttle remote.

## MCS<sup>2</sup> MIDI/MMC Version

Media Control Station<sup>2</sup> MIDI/MMC features transport buttons, a precision optically encoded jog wheel and jog/shuttle control button. Shift and Option modifier keys let the MCS send more than 20 different MIDI Machine Control (and General Purpose Controller) Messages, including Track Arming. 

MCS<sup>2</sup> sends MMC messages for controlling a variety of compatible hard disk recorders and computer based editing systems. Use it with recorders from Akai, Fostex, Mackie Roland, Tascam, and others.

### MCS<sup>2</sup> Features

- Professional Quality Compact Controller
- Provides Remote Transport Control
- Remotely Controls up to 20 Different Functions
- Durable All Metal Construction
- Available Models (Specify When Ordering)
  - MCS<sup>2</sup> Mac (ADB) with Software for Mac OS.
  - MCS<sup>2</sup> MIDI with MIDI Machine Control.
  - MCS<sup>2</sup> 9-Pin for VTR Control.
  - MCS<sup>2</sup> RS-232 w/Software for Windows 98/NT.



JLCooper's Award Winning Control Station technology is being used industry wide in television and radio broadcast, recording, video post, and multimedia production. JLCooper CS-10<sup>2</sup> Control Stations are used and supported by Autodesk, Digigram, Digidesign, Merging Technologies, Steinberg, Sony and many others.

## CS-10<sup>2</sup> Control Station

The CS-10<sup>2</sup> Professional Control Station™ is the definitive control surface for Digidesign, Digigram, SoundScape, Steinberg and most other professional digital audio editing systems and software.

Musicians, video & film professionals, audio post and broadcast facilities love the CS-10<sup>2</sup>'s easy-to-use controls.

It provides complete transport, automation and digital signal processing functions without tedious mouse and key commands.

With large, tactile buttons for Record, Play, Stop, Forward, Rewind and other frequently used editing functions, you can concentrate on your project, not on your computer.

The optically encoded jog/shuttle wheel provides precise positioning and effortless scrub editing.



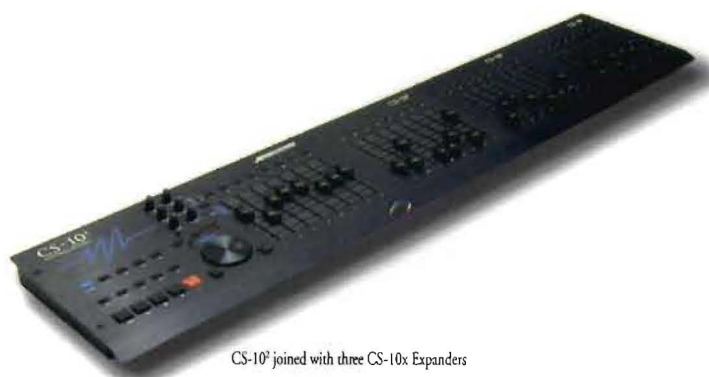
### CS-10<sup>2</sup> Features

- Professional Tape Recorder Style Controls
- Footswitch Input for Hands-free Operation
- Optional CS-10x for up to 64 faders
- CS-10<sup>2</sup> Size 17.5" x 7.5" x 1.4"
- Weight - 13 Lbs.
- CS-10x Size 8.75" x 7.5" x 1.4"
- Weight - 5 Lbs.
- Available Models (Specify When Ordering)
  - CS-10<sup>2</sup> MIDI
  - CS-10<sup>2</sup> RS-232
  - CS-10x MIDI
  - CS-10x RS-232



### CS-10X Control Station Expander

The CS-10X™ is an expander for the CS-10<sup>2</sup> that can be attached to provide additional controls. Use of up to 7 expanders are supported by the CS-10<sup>2</sup>. Digidesign's Pro Tools now supports the use of three CS-10X units plus the CS-10<sup>2</sup> for a total of 32 physical faders.



CS-10<sup>2</sup> joined with three CS-10x Expanders



## Amazing 32-Channel Miniature Control Console Fits In the Palm of Your Hand!



### CS-32 Physical Specifications

- Size - 8.8" x 9.25" x 1"
- Weight - 5 Lbs.



CS-32 MiniDesk Software for Macintosh and Windows

The new CS-32 MiniDesk™ is a miniature control surface for fast access to the most commonly used functions in most audio programs. It works with Digidesign ProTools, Steinberg Nuendo, Cubase SX, VST, MOTU Digital Performer, Cakewalk Sonar, Sonic Foundry, Ableton Live, Propellerhead Reason, Merging Technologies Pyramix, Apple Logic, Garage Band and Most Audio Software Programs!

The CS-32's radically small size does not reduce its intense capabilities as an extremely powerful controller with 32 Dedicated Faders/Channel Strips for real-time control of volume levels, Mute, Solo, Track Arming and more.

The "Mini" has Tactile Transport Buttons, Cursor Keys and Weighted Jog/Scrub Wheel, just like the big guys.

Six Rotary Knobs give you hands-on, automation control of Panning and Plug-Ins. A full bank of quick function keys are ready for frequently used editing features.

MiniDesk takes up less space than a sheet of paper, but it's nobody's baby. Use it almost anywhere, even on the most crowded desk. It's perfect for portable recording applications with a laptop computer.

You can record, edit and mix your projects to perfection, using the CS-32 MiniDesk from JLC Cooper, the pioneer and proven leader in audio control surface design.

With a controller this small, you might want to get an extra one to keep in your car.

### CS-32 MiniDesk Features

- Adds Tactile Controls to Most Digital Audio Editing Systems MIDI Sequencers and Animation Software
- 32 Dedicated Channels with 20mm Faders and Channel Buttons  
Eliminate Fader Bank Switching Confusion
- Puts Over 150 Dedicated Controls At Your Fingertips
- Perfect for Project Studios and Home Studios
- Weighted Jog/Scrub Wheel (Optically Encoded)
- 2 Digit Alphanumeric LED Display
- Dual LED Activity Indicators
- Sends Various Messages - CS-10 Emulation, General Controllers
- Low Profile and Compact Design with Heavy Duty Construction
- MIDI/MMC, USB and RS-232 Models Available
- USB Version Includes Software (Mac and Win) and Keysets



JLCooper was one of the developers of the MIDI Time Code Standard. In 1987 we designed and manufactured the world's first synchronizer that supported MTC. We continue to offer the most reliable and innovative solutions to solve the complex synchronization challenges in today's studio and post environments.

## dataSYNC<sup>2</sup> ADAT/MIDI SYNCHRONIZER

JLCooper improves on the successful dataSYNC with dataSYNC<sup>2</sup>™, the ADAT MIDI SMPTE synchronizer.

The dataSYNC<sup>2</sup> connects right to your Alesis ADAT and provides SMPTE and MIDI Time Code to drive sequencers and digital audio workstations without wasting a valuable tape track for time code.

As a standard function, it also includes the ability to send MIDI Clock with Song Position Pointer for hardware sequencers, workstation keyboards and drum machines. Complete variable tempo and meter data is sent without the restrictions of other products.

dataSYNC<sup>2</sup> features automatic sample rate detection and supports 44.1 and 48k.



*"A brilliant addition for the ADAT... a gotta-have-it"*  
-Roger Nichols, EQ



Now with bi-directional MIDI communication to the ADAT, you can use MMC to control ADAT's transport, track enable and locate functions from your computer.

A merging MIDI input lets you record new MIDI tracks while sync'd to ADAT sample clock.

### dataSYNC<sup>2</sup> Features

- No Wasted Tracks for Sync
- Two 9-Pin Sync Cables Included
- 8.5" x 4.7" x 1.6" Weight - 3 lbs.



## PPS-2 SYNCHRONIZER

JLCooper's PPS-2™ is ideal for anyone who owns a sequencer, drum machine, workstation or hard disk recording system, and needs to sync to tape.

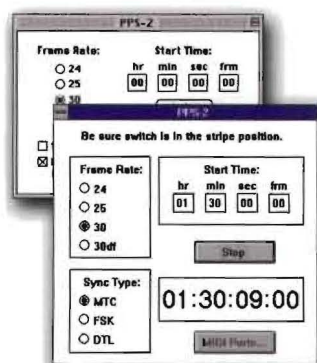
PPS-2 offers the advantages of several synchronizers in one versatile package. It reads and generates SMPTE time code and converts SMPTE into MIDI Time Code or Direct Time Lock. It also reads and generates JLCooper's "Smart FSK" sync and converts it into MIDI Clock with Song Position Pointer. Jam Sync/Regeneration, Flywheeling, Auto-Merge and a low price make the PPS-2 the best choice for an affordable synchronizer.

Optional PPS-2 remote software for Windows and Macintosh lets you set SMPTE frame rate and start time when striping.



### PPS-2 Features

- Easy to Use
- SMPTE Jam Sync/Regeneration
- 1 MIDI In with Auto Merge and 1 MIDI Out
- SMPTE Stripe can be Started at any Time
- SMPTE 24, 25, 30 & 30 Drop Rates Supported
- 4.25" x 4.7" x 1.6" Weight - 3 lbs.



### PPS-2 Plus Option (Now Included)

The revolutionary PPS-2 Plus enhancement adds the ability to read MIDI Time Code (MTC) from any source and convert it into SMPTE time code.

This option is user-installed and lets your hard disk recorder or computer based digital workstation control machine synchronizers, automation systems and other devices requiring SMPTE Time Code.

*Unique and Innovative MIDI applications are a hallmark of JLC Cooper Electronics. New products for audio/video interfacing and control allow you to streamline the way you work and enhance the way your existing products function together.*

## MMC/9PIN+ MIDI Machine Control to 9-Pin Converter

MMC/9PIN+ is an innovative device integrating the world of MIDI to the world of professional video. It allows computer-based sequencers, audio mixing consoles and digital editing systems to control 422/P2 compatible video tape recorders (VTRs) and disk based recorders. Audio editors, film and video composers can control both a VTR and workstation at the same time.

MMC/9PIN+ translates MMC transport functions, locate points, shuttle and track arming messages into corresponding RS-422 (Sony 9 Pin/P-2) commands. BVU-800/900 emulation is supported. By referencing 9-Pin sync with video, it outputs SMPTE and MTC without wasting an audio track.



### MMC/9PIN Features

- Converts MMC Transport Functions, Autolocates, Track Arming and Shuttle Commands to 9-Pin (Sony BVU-800/900 Emulation)
- Allows remote control of VTRs from any PC
- Size - 8.5" x 4.7" x 1.75" Weight - 3 lbs.

## 9PIN/MMC 9-Pin to MIDI Machine Control Converter

JLC Cooper's new 9Pin/MMC connects popular hard disk recorders including Tascam MX-2424, Mackie HDR24/96, Roland VS Series, Fostex and most computer-based audio editing systems to a standard video edit controller or switcher, for automated audio-follows-video control.

9Pin/MMC Interface interprets standard RS-422/P2 protocol messages and converts them to corresponding MIDI Machine Control (MMC) messages. This allows most hard disk audio recorders and computer based editing systems to be controlled by video editing systems that were originally intended to control professional Video Tape Recorders and DDRs.

Supported functions include play, stop, fast forward, rewind, record, locates, track arming, time code frame rate, program change, track record, set locate in/out points, pre-roll, post-roll and more.



### 9PIN/MMC Features

- Interfaces Hard Disk Recorders like Tascam, Mackie, Roland, Fostex and Computers-based Systems with most Video Edit Controllers
- Supports GVG, ESAM2, MIDI, MMC Protocols
- Size - 8.5" x 4.7" x 1.75" Weight - 3 lbs.

## DAFV<sup>2</sup> Digital Audio Follows Video Interface

DAFV<sup>2</sup> connects popular digital audio mixers including the Sony DMX-R100 Ramsa WR-DA7, Tascam TM-D8000, Yamaha 02R and Mackie D8B to a video edit controller or switcher, for automated audio-follows-video applications.

DAFV<sup>2</sup> adds the essential interface which is missing from most popular digital audio mixers, the ability to respond to ESAM and Grass Valley GVG protocols.

Commands from the edit controller are converted to allow your mixer to automatically perform audio transitions, cuts and dissolves in perfect sync with video. Start and Stop Transition, Set Rate, Set Program and Preset Crosspoint and Set Fader Level Commands are supported.

Your edit controller's EDL (Edit Decision List) lets you specify the in and out points and the type of edit. The DAFV<sup>2</sup> automatically detects commands from the edit controller, determines which protocol is being sent and configures itself to receive either GVG or ESAM2 protocols.



### DAFV Features

- Interfaces Digital Mixers like Sony DMX-R100, Ramsa WR-DA7, Yamaha 02R, 03D, 01V and Mackie D8B with Video Edit Controllers
- Supports GVG and ESAM2 Protocols
- Size - 8.5" x 4.7" x 1.75" Weight - 3 lbs.



**The need to run MIDI signals over long distance is essential for use in recording facilities, theatres, arenas, churches, schools, cruise ships, casinos, nightclubs and other venues using simple twisted pair wiring. Touring professionals also rely on JLCooper MIDI Line Amplifiers to carry MIDI signals long distances over standard audio snakes.**

## **MLA-10 MIDI Line Amplifier**

**"Best in Show Winner – 91st AES"  
- EQ Magazine**



JLCooper Electronics extends the distance of MIDI with the MLA Series - MIDI Line Amplifiers. They let you effectively extend MIDI cable length using twisted pair wire or a standard audio snake.

MIDI Line Amplifiers are specifically designed for sending MIDI data over long distances with the capability to send information in excess of 1000 feet.

Ideal for touring systems or permanent installations, MLA's can be used in schools, recording and production facilities, boardrooms, live performances, convention centers, churches, theaters, stadiums, amusement parks and more.

### **When to Use a MIDI Line Amplifier**

MIDI (Musical Instrument Digital Interface) is an increasingly important consideration for schools, recording facilities, stadiums, arenas, hotels, amusement parks, or other facilities where MIDI messages are required to be sent a long distance, or to multiple locations.

However, the MIDI standard only permits a maximum cable run of less than 50 feet. The innovative MLA Series MIDI Line Amplifiers overcome this limitation.

The MLA's convert the MIDI signal into a balanced high speed digital protocol that can travel over common twisted pair wire. The signal is converted back to MIDI through another MLA at the other end of the cable run.

MLA's are ideal for permanent installations or anywhere a longer MIDI cable run is required.

The MLA's can be easily networked to multiple locations such as from the master control room to a series of separate MIDI rooms in a recording studio, broadcast facility or educational lab. This allows a you to de-centralize the location of MIDI devices in the system.

### **MLA-10**

The MLA-10 is designed to fit into a standard single 19" rack space. Each MLA-10 features 8 MIDI lines configured as 4 inputs and 4 outputs. It has 4 MIDI input connectors, 4 MIDI output connectors and individual MIDI activity LEDs.

### **MLA-10 MIDI Line Amplifier Features**

- 4 MIDI Input connectors
- 4 MIDI Output connectors
- Detachable terminal strip connectors
- MIDI activity LEDs
- MIDI cable runs over 1000'
- Uses common twisted pair wire
- Multiple units may be networked
- Low power consumption
- Can supply power to multiple MLA-1's
- Front panel power switch
- Single 19" rack space
- Heavy duty rack enclosure
  
- Dimensions 19" x 1.75" x 3.87"
- Weight 3.25 lbs



## **MLA-XLR MIDI Line Amplifier**



MLA-XLR extends the range of MIDI cables to over 1000 feet using standard balanced audio lines (audio snakes, mic cables, etc.). It requires no configuration and it's simple to use.

MLA-XLR pairs can carry data over two standard XLR Mic cables and provides a lower cost expansion option for interfacing with other MLA-1 and MLA-10 units in a network application.

### **MLA-XLR MIDI Line Amplifier Features**

- 1 MIDI Input
- 1 MIDI Output
- 1/4 Rack mount version
- XLR and MIDI connections
- MIDI cable runs over 1000'
- Uses common twisted pair wire
- Multiple units may be networked
- Can be used in pairs or in combination with MLA-1's and MLA-10's
  
- Dimensions 4.25" x 4.7" x 1.6"
- Weight 3 lbs.



The need to run MIDI signals over long distance is essential for use in recording facilities, theatres, arenas, churches, schools, cruise ships, casinos, nightclubs and other venues using simple twisted pair wiring. Touring professionals also rely on JLC Cooper MIDI Line Amplifiers to carry MIDI signals long distances over standard audio snakes.

## MLA-1 MIDI Line Amplifier

### MLA-1

The MLA-1 can be wall panel mounted or used with a separate MIDI jack panel. This facilitates greater flexibility for installations where MLA-1 units can be in every required room.

MLA-1 can be powered by an MLA-10 or used alone with a separate power supply. Its compact size allows it to be mounted on or inside a wall or panel.



### MLA-1 MIDI Line Amplifier Features

- 4 MIDI Inputs - 4 MIDI Outputs
- Panel mount version
- All barrier strip connections
- Multiple units may be networked
- Can be used with other MLA units.
- Dimensions 6.6" x 6.2" x 0.85"
- Weight 2 lbs.

## eBOX Quad Serial to Ethernet Interface

eBOX is a 10/100BASE-T (Ethernet) to RS-232/422(9-Pin)/485 and GPI hardware interface. It acts as a portal for controlling devices across your facility or across the world.

It eliminates information bottlenecks and overcomes distance limitations typically inherent to serial communication. It simplifies long distance cabling by using IP addressable, point-to-point architecture to send control messages over existing 10/100 BASE-T wiring.

eBOX features four serial connectors, activity LED's, 24 GPI Inputs and 24 GPI Outputs as a standard feature (General Purpose Interface - facilitates switch closure control).



Commands from a host NLE, Browser or RS-422 switcher/controller may be directed to individual devices on the network.

This allows broadcast or networked facilities to control distanced machine rooms from a facility's central server.

cation is possible. An unlimited number of units can be addressed.

JLCooper's SDK provides comprehensive tools for software developers to link Visual Basic, C++, HTML or embedded devices for direct control of any device connected to any eBOX.



eBOX Rear Panel

It's ideal for LAN, WAN and Internet control of VTRs, DDRs, HDRs, switchers, computer based editing systems, cameras, projectors and other products that use RS-232/422 (9-Pin)/485 and GPI.

eBOX is ideal for broadcast television, streaming media networks, multi-room editing facilities,

news production or in any audio/video/multimedia studio where remote hosts need to control devices over long distances or via the Web. Host to eBOX, eBOX to host and eBOX to eBOX communi-

### eBOX Features

- 4 9-Pin D Sub Serial Connectors
- 1/2 Rack Version
- Two 24Pin D Sub GPI Connectors
- RJ-45 Ethernet Connector
- Network Units on LAN or WAN
- Dimensions 8.5" x 4.7" x 1.75"
- Weight 4 lbs.



# Success Through Innovation and Partnership

## *Developers and OEMs Welcome*

JLCooper Electronics successfully works with industry leading companies and educational institutions in a variety of OEM, private label, custom engineering, software development and other relationships.

Dedication to optimum control surface and interface engineering, quality, and reliability, makes JLCooper the preeminent partner, helping your company achieve its goals on time and within budget.

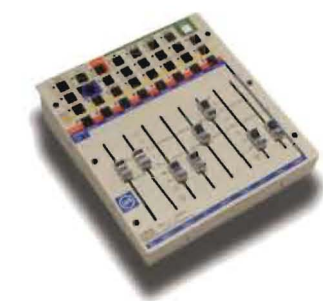


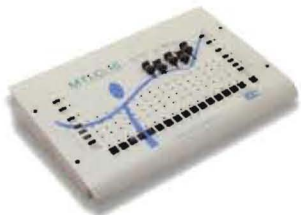
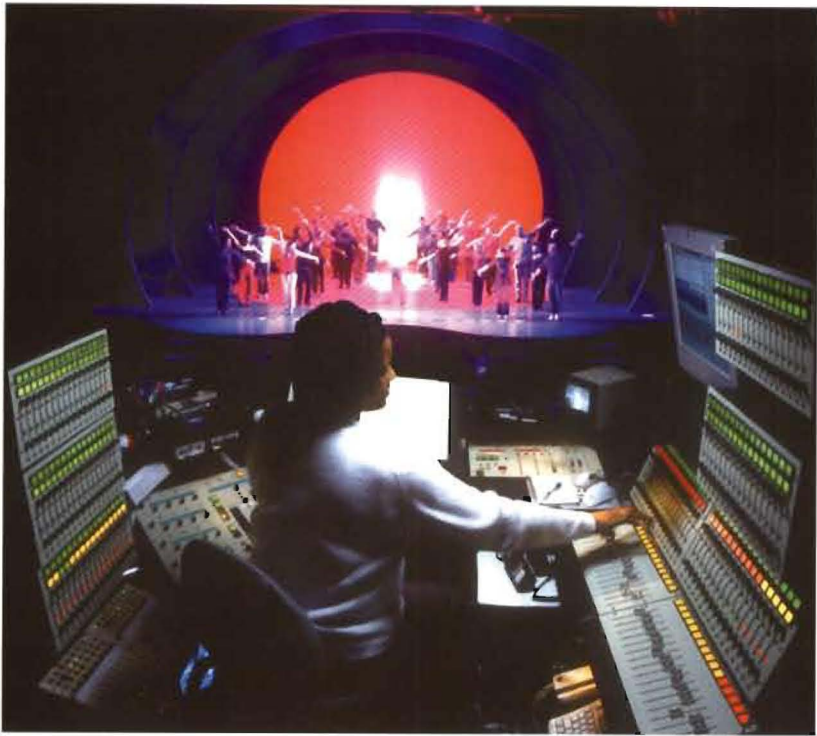
We have an established developer program for to provide documentation and support for our products. We offer a variety of "off the shelf" products that can be supported "as is" or customized to meet your needs. JLCooper will also help to support and evangelize your compatible products, creating additional strategies and opportunities.

Successfully working in many OEM relationships, JLCooper Electronics develops and manufactures products for companies on the forefront of digital audio, video, multimedia and other technologies.

Let us strengthen your existing development efforts by providing hardware and software products tailored to meet your needs. JLCooper's range of services include circuit board and enclosure design, manufacturing and testing, packaging and documentation. All this from the team consistently chosen by dozens of world-class manufacturers as the best in the business.

Visit [www.jlcooper.com/dev.html](http://www.jlcooper.com/dev.html) for additional information and details.







## The JLC Cooper Story



Control, Automation, Synchronization, & Interfacing Products  
WWW.JLCOOPER.COM

JLCooper Electronics is truly a pioneer in the development of professional control, automation, synchronization and interfacing products.

Our solid reputation for design innovation is a testimony to the quality, reliability and performance of every product we make.

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